ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION,

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

VOL. VIII. MARCH, 1897. No. 3.

CONTENTS:

Piper—A remarkable sembling habit of Coccinella transversoguttata..... 49
Pilate—Collecting season in S. Georgia 51
Baker—Remarks on list of the Hemiptera of Colorado..... 53
Editorial..... 55
Economic Entomology 57
Notes and News..... 59
Entomological Literature..... 60
Doings of Societies..... 66
Entomological Section..... 68
Dunning—Notes on Philonthus..... 68
Fox—The fourth species of Plenoculus 71

OUR illustration represents the pretty Sphinx moth, *Deilephila lineata*, feeding on *Azalea nudiflora*. The larva also feeds on *Portulaca*, *Pyrus*, *Fuchsia*, etc. The figures are from the unpublished drawings of T. R. Peale, who commenced a work on Lepidoptera in 1833.

In this number we present a list of the members of the oldest entomological society in America. Here will be found the names of many of the most distinguished entomologists the world has known. The history of the American Entomological Society is largely the history of entomology in this country, and it is just as active to-day as it has ever been in the past.

———o———

A Remarkable Sembling Habit of Coccinella transversoguttata.

By C. V. PIPER, Pullman, Wash.

The habit of various Coccinellids of sembling in numbers in places where they seek shelter has often been noted, and the fact is a familiar one to most entomologists. In no species have I observed the habit more marked than in the commonest form in this locality, *Coccinella transversoguttata*, and it is no uncommon thing to find, in Winter, a hundred or more under a board or

similarly sheltered. But this habit of sembling when seeking shelter seems to be a totally different thing from the one now to be described.

In July, 1893, while collecting on the summit of Moscow Mountain, Idaho, altitude about 5000 feet, I was astonished to find in the crevices of rock near the summit immense numbers of dead ladybirds of this species. As an illustration of their great numbers I may mention that under a flat piece of rock I picked up one mass of their bodies over a foot square and two inches thick. It contained, from estimates made later, the remains of over ten thousand individuals. A careful search of the vicinity failed to disclose any living ones. None of the plants in the vicinity were infected with scales or aphides, and none of them to my knowledge are ever affected by these insects in sufficient numbers to furnish food for the hosts that had perished there.

In October of the same year Prof. J. M. Aldrich observed, on the same peak, living ones of the same species, and the phenomenon was reported to him as occurring on nearly all the neighboring buttes, one of which, indeed, is called Ladybird Mountain.

Prof. Aldrich states that the beetles were so abundant that he could gather them by the handful, but that he could detect no reason for their sembling.

In July of the present year while collecting in the Blue Mountains, Washington, I found the same ladybird on the barren rocky summit of a peak, 5000 feet high. The insects were crawling over the hot, bare rock, and upon being disturbed would circle about for a few moments and again alight. So great were their numbers that they made quite as much noise as a small swarm of bees. Indeed, I heard them before I saw them, and actually supposed I had disturbed a nest of yellow jackets.

The summit of this particular peak was quite barren and could not possibly furnish food enough for the ladybirds I saw. Furthermore, careful search of the vicinity failed to detect a single aphis, or even traces of aphis work.

That the phenomenon is not confined to mountain peaks appears from the observation of a correspondent in Kittitas County, Washington, who reports a ladybird, in all probability the species under consideration, as gathering in great numbers about a large boulder near his house.

In view of these strange facts the question naturally arises as to the significance of the habit, and thus far no explanation has been proposed that will stand critical examination. A common opinion is that the insects seek the rocks for warmth and shelter. If this is correct why do they seek only the rocks near the summits of peaks and not those lower down? Again, why should they seek shelter on a hot July day? Finally, it would seem that the summit of Moscow Mountain furnishes them not a shelter, but a graveyard. It must also be remembered that search for a shelter does not for a moment explain their sembling in such swarms.

A second theory would explain the phenomenon as the result of air currents carrying the insects up the peak. But if this is true why are not other insects similarly affected? Even granting this it is does not explain their remaining there in perfectly calm weather. In this connection I may state that many insects are undoubtedly carried up mountains by currents of air.

On Mt. Rainier I found most excellent collecting on snow-fields and glaciers at altitudes of 7000 to 9000 feet, but it is worthy of remark that Coccinellidæ were decidedly scarce in such situations. Two or three other attempts to explain the significance of the habit seem to me unworthy of mention and the writer humbly confesses that he has no theory to air on the subject. Has anyone else?

———o———

COLLECTING SEASON IN SOUTH GEORGIA.

By G. R. Pilate, Tifton, Ga.

A few words in regard to the best collecting season may be of some interest to entomologists. Flowers commence early in the season and there are more or less of them all the year. But about the middle of May the gall-berry bushes come in bloom and last two or three weeks. I do not know the botanical name of this plant. It is an evergreen and grows about four to six feet high, and bears quantities of black berries. It has a very small white flower, but it grows in masses and is very sweet; the bushes generally grow in wet places. Sometimes they cover acres of ground. Insects of all species and families swarm in immense numbers on these flowers. In passing near the plants you are immediately attracted by the loud hum of their wings. Hymenoptera of all

kinds predominate. It is easy to capture large numbers of fine specimen in a short time of Hymenoptera Coleoptera, Diptera and other orders. Before these flowers are gone the palmetto comes in. They are also very sweet and attractive to insects. They last to the middle of June.

For Diptera the best places at the same season are on the large patches of pitcher plants in marshy places. Large numbers can be taken by sweeping ; I think they breed in the decaying mass inside of the tube-like leaves.

This is my first year in this locality. I find all kinds of plants and vegetation entirely different from what they were in middle Georgia. Even the common weeds are nearly all different ; this would be a paradise for a botanist that had never been here before. Wild flowers are not in such quantities as in California, but there is such a variety of beautiful species.

ANTS IN SOUTH GEORGIA.

I have lived in different parts of the South, including middle Georgia, Louisiana and Southern California. I thought I had seen plenty of ants before, but I never have seen such numbers as are on this farm. I do not know if they are as thick all over this country as they are here, or not. This farm is set out to a peach orchard, and it may be that as a good deal of the land is never plowed on account of the trees, that the ants have more chance to multiply. But during our dry seasons here in Spring and Fall the surface of the earth is literally covered with them. They seem to be nearly all of one species, a black ant about an eighth of an inch or more in length. When mashed or touched they emit a strong, unpleasant odor which is sickening to me ; there is no keeping them out of the house. The floors are covered with them. As you sit in a chair and move your feet once in a while you kill a few. This draws more, and you soon have a black spot on the floor. You don't think about it until you smell them ; under the rockers of a rocking-chair, you will kill so many of an evening, that there will be two black marks just the width and length of the rockers. They seem to be ravenous all the time and will devour every living thing that comes in their way. In walking along the roads I have noticed them attack and kill insects large and small. A beetle or grasshopper will be moving along when an ant will catch hold of a leg. The thing

will try to get rid of the ant, when instantly a few more will take hold. In the struggle the insect will soon be on its back, when in a moment it will be just swarming with ants.

There is no putting out any bait or traps for insects. The ants devour everything, as I have found to my sorrow, as I had no luck with small bait—I tried a dead chicken. In a few days the ground for yards around it was just alive with the pests. They were dragging away every living thing, including perfect insects and larvæ that they could get hold of. They cleaned up everything. I have seen them attack little chickens that were not more than a day or two old and gather so thick on fect and head, that the poor little things would soon give up and be on their back. I have to watch the specimens I have collected very close for fear they will get at them—they did eat up a box of Diptera fo me.

———o———

REMARKS ON LIST OF THE HEMIPTERA OF COLORADO.*

By CARL F. BAKER, Auburn, Ala.

Ninyas pallens Stal., p. 23.—This is the *Geocoris pallens* for which several records are given on the same page.

Corythuca fuscigera Stal, p. 57.—Several species were confused under this name, as shown by subsequent determinations by Dr. Uhler. Whether this is the species occurring so commonly on *Cnicus*, at Fort Collins, remains to be determined.

Helicoptera floridæ Walk., p. 69.—According to Dr. Uhler this determination is erroneous, the species not being *floridæ*.

Pissonotus pallipes Van D., p. 69, and others of Van Duzee's Delphacids mentioned on this page are manuscript species and have not, up to the time of this writing, been published.

Pachynopsis Uhler, pp. 71–72.—This genus is synonymous with *Macropsis* Lewis.

Idiocerus interruptus G. and B., p. 74.—The record for this species, on page 75, was dropped under *I. distinctus*, and is "Fort Collins, September 26th on elm (Baker), and September on grass (Gillette)." The latter occurrence was probably accidental. This "species" is of doubtful validity.

* Bulletin No. 31 (Tech. Series No. 1), of the Colorado Agricultural Experimert Station at Fort Collins, Colorado. Copies of this Bulletin may be obtained free on application to the Director of the Station.

Idiocerus snowi G. and B., p. 76.—The record for this species, on page 80, was dropped below *I. rufus*, and is "Colorado Springs, August (Tucker)."

Idiocerus perplexus G. and B., p. 78.—This is only a variety of *pallidus*.

Paramesus jucundus Uhler, p. 84.—The synonym should read *Eutettix* instead of "*Eutettx*."

Deltocephalus melsheimeri Th., p. 88.—It is probable that most of the specimens referred to under this species belong to *affinis*. It is doubtful if the true *melsheimeri* has yet been found in Colorado.

Thamnotettix gillettei Van D., p. 98.—This "species" can be readily manufactured from *T. belli* by soaking specimens for some time in alcohol.

Thamnotettix punctiscuta G. and B., p. 99, is the male of *T. infuscata*.

Thamnotettix tenella Uhler, p. 100.—This becomes *T. tenella* Baker. See "Psyche," vii, No. 239, Suppl. p. 24.

Thamnotettix sonoræ G. and B., p. 100.—This species was founded on pale individuals of *T. belli*.

Cicadula lutea G. and B., p. 106, is a weak and untenable variety of *Thamnotettix caricis*.

Aphalara calthæ L., p. 114.—It is probable that some of the forms recorded under this name will be found to differ from European specimens of the species.

Dr. W. OTTINGER, of Exbrucke (Münchener medicinasche Wochenschrift, Dec. 8, 1896; Wiener medizinische Blatter, Dec. 17, 1896) tells of his lack of success with ammonia for insect stings, but says that he has found ichthyol an admirable remedy. He has tried it in numerous cases of stings of flies, gnats, bees and wasps, and has found that it quickly and surely causes the phenomena of inflammation to subside. He attributes its effect to its vaso-constrictor action. It is best applied pure in a pretty thick layer, but it may be used in the form of an ointment.

FLORIDA insects are likely to suffer this Winter as, in addition to the resident collectors in the State, there are some from the North and others intending to visit that part of the South. Dr. John Hamilton and Mrs. A. T. Slosson are there at present, and Dr. H. G. Griffith, President of the Feldman Collecting Social, will sail for Florida in a few days.

ENTOMOLOGICAL NEWS.

Published monthly (except July and August), in charge of the joint publication committees of the Entomological Section of the Academy of Natural Sciences, of Philadelphia, and the American Entomological Society. It will contain not less than 300 pages per annum. It will maintain no free list whatever, but will leave no measure untried to make it a necessity to every student of insect life, so that its very moderate annual subscription may be considered well spent.

ANNUAL SUBSCRIPTION $1.00, IN ADVANCE.

Outside of the United States and Canada $1.20.

☞ All remittances and communications should be addressed to ENTOMOLOGICAL NEWS, Academy of Natural Sciences, 19th and Race Streets, Philadelphia, Pa.

PHILADELPHIA, PA., MARCH, 1897.

IN the NEWS for October, 1893, page 266, and again in the number for February, 1894, page 42, we have had something to say on the subject of postage on specimens of natural history to foreign countries. We have there detailed the efforts made by the Academy of Natural Sciences of Philadelphia to obtain lower rates, explaining that the present regulations of the Universal Postal Union permit such specimens to be mailed only at letter rates, although it is true that many countries have Parcel Posts, the charges for which are lower than those for letters. The aim of the Academy has been to secure the adoption by the Postal Union of a proposition offered by the U. S. Post Office Department that specimens of natural history be admitted to the international mails at the rates for, and under the conditions applicable to, samples of merchandise. This proposition was, however, rejected at the last International Postal Congress of Vienna.

At the International Congress of Zoology, held at Leyden, Holland, in September, 1895, Dr. Chas. Wardell Stiles, official delegate of the U. S. Government, offered resolutions, which were subsequently adopted, that the Swiss Government be requested, through its delegate to the Congress of Zoology, to propose to the next International Postal Congress an amendment to the regulations thereof whereby specimens of Natural History shall be carried in the mails of the Universal Postal Union at the

rates for samples of merchandise; that an appeal should be addressed to all the delegates and members of the Congress of Zoology to bring this amendment to the notice of their respective governments, so that those governments should instruct their delegates to the Postal Congress to act favorably upon the same; that copies of these resolutions be sent by the Secretary of the Congress of Zoology to all governments forming part of the Universal Postal Union and which were not represented at the Congress of Zoology.

In accordance with these resolutions, Dr. Stiles suggested to the committee of the Academy in charge of this matter of postage that, although it is probable that the U. S. Government will vote in favor of this proposed amendment, seeing that it is the same proposition which the United States had presented at Vienna, the cause would be helped by the Academy adopting resolutions in favor of this proposed amendment and requesting the Postmaster General at Washington to instruct our American delegates to vote in favor of it.

This the Academy has done, but other American scientific bodies should join in the work, adopt similar resolutions and send them to our Postmaster General that he may know that the students of natural history in the United States eagerly desire such a reduction in postage rates. The next International Postal Congress meets at Washington on the fifth of May next. The purpose of this article is to urge all those who read it to use such means and influence as may be at their command to help in the accomplishment of this end.

For the guidance of those who will aid in the manner suggested, a translation of the original French text of the amendment referred to is as follows :

"Amendment to Article XIX (samples) 4, of the Regulations of Details and Order.

5. Objects of natural history, dried or preserved animals and plants, geological specimens, etc., of which the transmission has no commercial interest, and the packing of which conforms to the general conditions concerning packages of samples of merchandise."

If this amendment be adopted by the Postal Congress, specimens of Natural History can be sent to countries of the Universal Postal Union at the rate of one cent for every two ounces.

DEPARTMENT OF ECONOMIC ENTOMOLOGY.

Edited by Prof. JOHN B. SMITH, Sc.D., New Brunswick, N. J.

Papers for this department are solicited. They should be sent to the editor, Prof. John B. Smith, Sc.D., New Brunswick, N. J.

(Continued from page 38, vol. viii.)

Following this Mr. Johnson reviewed the present distribution of the San José scale in Maryland, stating that the pest had been definitely located in twelve counties, including three nurseries. It was introduced on nursery stock from New Jersey, Georgia, Missouri, and possibly Pennsylvania; the stock in the latter case having been received from a Philadelphia seedman. The speaker was of the opinion that the pest could never be exterminated in Maryland on account of its firm foot-hold in some large orchards, but that he believed it could be kept in check by persistent and energetic fighting on the part of a thorough and harmonious State organization of nurserymen and fruit-growers. In speaking of the potash lye, whale oil soap, he said he was just in the midst of an extensive series of experiments with this material on the scale in the large orchards of R. S. Emery, of Chestertown, Md., and that over 2500 pounds had already been used on the infested trees at the rate of 2½ to 2¾ pounds to a gallon of water. He was of the opinion that the scale could not be exterminated in bearing orchards with the soap washes. He said pear trees treated last year with the soda whale oil soap at the rate of 2, 2½ and 3 pounds to a gallon of water, were this Fall literally covered with the insect. Of the two he said the lye was very much better than the soda soap. Its action on the scale is quicker and its application is not so troublesome from the fact that it does not thicken when cool. He said that Mr. Emery, who was the first to use this soap against the San José scale, was of the opinion that some entomologists placed too much confidence in these washes for the destruction and extermination of the pest. The author said he had under way a lot of experiments with various combinations of kerosene emulsion and whale oil soap, the cost of the washes ranging from four to nine cents per gallon. Referring to the Maryland "Trees and Nursery Stock" law he said it had been a great factor in awakening an interest in this matter among nurserymen and fruit-growers. Although the law is imperfect in some points, it has been carried out with much satisfaction. The inconsistent points have been passed over, and, with a few minor changes, the present Act will meet the peculiar needs of the State. It is intended to have the law modified at the next session of the Legislature, and it is hoped that an Act may be passed that will be perfectly consistent and agreeable to all parties concerned.

Dr. Howard read a paper by Mr. Gerald McCarthy entitled, "Economic Entomology in North Carolina." Briefly outlining the entomological work of the season the author said *Phorbia brassicæ* was very destructive

to young cabbage along the coast region early this season. Tobacco decoction and crude carbolic acid applied to the soil around the plants gave the best results. The cotton caterpillars, *Heliothis* and *Aletia*, the Northern army worm, the chinch bug, and the imported elm leaf beetle were reported from various localities. *Lina scripta*, the Western cotton wood beetle, was found on Carolina poplar and cotton wood. *Gelechia picipelis* was found mining the leaves of tobacco. The bull or horse thistle, *Solanum carolinense* seems to be its normal host. The New York plum scale, convex scale, gloomy scale, San José scale, oyster-shell bark-louse, scurfy bark louse, Euonymus scale and Privet scale were reported from the State. The writer stated that a law directed against insect pests and plant diseases would be presented to the next Legislature for passage.

In the absence of the authors Dr. Howard read a paper on "Some Results of Recent Studies of Grass Feeding Jassidæ" by Herbert Osborn and E. D. Ball. In this paper the authors refer to the previous publications of the senior author on the subject of the damage done to pastures and lawns by the leaf-hoppers of the family Jassidæ, and show that while it has been indicated that the loss must be enormous, the insects appear to a great extent to be destroyed by the use of a tar pan or "hopper-dozer." Up to the present time, however, our knowledge of the life-histories of the species involved has been too meagre to furnish a certain basis for remedial measures. The present paper determines the life-history of a number of species, the range of their food-plants, especially in the larval stages, and a study of the specific limits of a larger number of species.

Following this Dr. Howard read a paper on "The Use of Steam Apparatus For Spraying." The speaker, after a brief historical account of the development of hand apparatus for spraying insecticides, considered in detail some twenty machines which have been constructed since 1882, which spray by steam-power, showing that a thoroughly efficient apparatus of this kind can be constructed for from $250 to $300. Not only were the especially constructed machines described, but also several make-shift apparatuses which utilized the services of ordinary watering carts and road engines and steam fire-engines. In conclusion, he expressed the opinion that such apparatuses will seldom be constructed by the owners of even larger orchards for their own individual use, but that for community orchard work they are valuable, and will come more and more into use, while the professional sprayer, an individual who is bound to come to the front, will use steam-power machines. Perhaps the greatest value which they possess, however, is for work on shade tree insects in cities and towns. The time is coming when every city which takes a pride in its shade trees will possess one or more of these machines.

Mr. A. D. Hopkins, of West Virginia, was elected chairman and Mr. M. V. Slingerland, of New York, secretary for the ensuing year.

W. G. JOHNSON,
Temp. Secretary.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

[The Conductors of ENTOMOLOGICAL NEWS solicit, and will thankfully receive items of news, likely to interest its readers, from any source. The author's name will be given in each case for the information of cataloguers and bibliographers.]

To Contributors.—All contributions will be considered and passed upon at our earliest convenience, and as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer, for each number, three weeks before date of issue. This should be remembered in sending special or important matter for certain issue. Twenty-five "extras" without change in form will be given free when they are wanted, and this should be so stated on the MS. along with the number desired. The receipt of all papers will be acknowledged.—ED.

PSEUDOSCORPIONS ATTACHED TO FLIES.—Apropos to the note in the January number of the NEWS I will say that seemingly precisely the same thing has come to me this Winter, having been found under the wing of a house-fly.—F. M. WEBSTER.

Mr. J. E. FARNUM says the country in Manika Land, S. E. Africa, is so perfectly flat that to obtain any view of one's surroundings it is necessary to climb either a tree or one of the curious ant-hills so common in this country and often as high as fifteen feet.

BRUCHOPHAGUS FUNEBRIS (Howard).—I have been very much interested in Prof. A. D. Hopkins' recent statement (Proc. Assoc. Econ. Entomologists) that this is a veritable feeder in clover seeds, and not a parasite of *Cecidomyia*, as had been supposed. Prof. E. O. Wootten collected some *Hosackia puberula* Benth. (det. J. N. Rose) in the Organ Mountains, New Mexico, and breeding in the seeds were numbers of this *B. funebris*. It seemed to me at the time that they fed upon the seeds, but I was not prepared to definitely assert that such was the case. My specimens were identified by Mr. Howard himself.—T. D. A. COCKERELL.

A CHRISTMAS-DAY MOTH HUNT.—In "Papilio" iv, p. 112, the editor, referring to the occurrence of a living and active *Hypena baltimoralis* at Gray's Ferry, January 25th, the thermometer registering 4° below zero, asks, "Are any of this genus known to hibernate?" Not far from this city (Wilmington, Del.) is a large maple tree slowly dying from the ravages of *Prionoxystus robiniæ*, an unusual food-plant here. On account of the flowing sap this tree is greatly resorted to Spring, Summer and Autumn by numbers of flies, bees, hornets, butterflies—chiefly *Graptas* and *P. atalanta*—and at night by various moths. One warm day late in November I commenced to strip the bark from a large limb of this tree which had broken and fallen till its tip touched the ground. Immediately a number of moths flew out from under the bark as I loosened it and sought resting-places high up in the tree. They were so active that I

could not then secure a specimen so concluded to wait for a colder day. On Christmas day I revisited the tree, and almost the first blow of the chisel uncovered a specimen of *Hypena scabra*, clinging to the wood under the loose bark; more were soon found all quite helpless with the cold, and one only gave a feeble flutter. On the same day three more were found under loose bark on a fence-rail, and perhaps half a mile distant from the first; all became quite active on being brought into a warm room, so there can be little doubt that this species hibernates in considerable numbers. I have taken this species and *humuli* at sugar very early in the Spring along with *A. ypsilon*.

I have found *Pamphila aaroni* at Chincoteaque Island, Va., and also in considerable numbers on the mainland of the Delaware peninsula at Ocean City, Maryland, on Aug. 27, 1896.

Plusia purpurigea has been bred by me on *Thalictrum;* imago emerged June 11, 1896. I have also taken *Mamestra ectypa* on flowers at dusk in the middle of July. Both species at Wilmington, Del.—FRANK M. JONES, Wilmingt n, Del.

Identification of Insects (Imagos) for Subscribers.

Specimens will be named under the following conditions: 1st, The number of species to be **limited to twenty-five** for each sending; 2d, The sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly. Exotic species named only by special arrangement with the Editor, who should be consulted before specimens are sent. Send a 2 cent stamp with all insects for return of names. **Please put date of capture and exact locality on each specimen.** Before sending insects for identificatic n, read page 41, Vol. III. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

Entomological Literature.

Under the above head it is intended to note such papers received at the Academy of Natural Sciences of Philadelphia pertaining to the Entomology of the Americas (North and South). Articles irrelevant to American entomology, unless monographs, or containing descriptions of new genera, will not be noted. Contributions to the anatomy of insects, however, whether relating to American or exotic species will be recorded.

1. THE ANNALS AND MAGAZINE OF NATURAL HISTORY. London, January, 1897.—Contributions from the New Mexico Biological Station. ——No. 2.—On a collection of Diptera from the lowlands of the Rio Nautla, in the State of Vera Cruz, i, C. H. T. Townsend.——No. 3.—The bees of the genus *Colletes* found in New Mexico, T. D. A. Cockerell. The classification of Oribatidæ, A. D. Michael. On Cteniform spiders from the Lower Amazons and other regions of North and South America, with a list of all known species of these groups hitherto recorded from the new world, F. O. P. Cambridge, 2 pls.

2. COMPTES-RENDUS. SOCIETE DE BIOLOGIE. Seance du 26 Decembre, 1896. Paris, 1897.—On an Acarine parasite of the vine (*Giardius vitis* Perraud, new genus), J. Perraud.——Jan. 16, 1897.—On the histological reactions and on the internal animal gall provoked in a larva of the Dipter *Cecidomyia destructor* by a parasitic Hymenopter *Trichacis remulus*, Dr. P. Marchal.

3. REVUE SCIENTIFIQUE. Paris, Dec. 19, 1896.—Colors of the scales of *Entimus imperialis*, M. Garbasso.

4. PROCEEDINGS OF THE BOSTON SOCIETY OF NATURAL HISTORY, xxvii, pp. 207–218, December, 1896.—List of exotic Orthoptera described by S. H. Scudder, 1868–1879, with a revision of their nomenclature, S. H. Scudder.

5. NATURAL SCIENCE. London, January, 1897.—Wasps and Weismann, O. H. Latter.

6. THE ZOOLOGICAL MAGAZINE. Tokyo, December, 1896.—The apple-borer (*Laverna herellera* Dup.?), M. Matsumura, 1 pl.

7. SCIENCE-GOSSIP. London, December, 1896.—Water-mites of Folkestone Warren, C. D. Soar, figs.——January, 1897.—*Dactylopius* or mealy-bugs, with a new species, T. D. A. Cockerell, fig.

8. BULLETIN 123, CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION. Ithaca, N. Y., December, 1896.—Green fruit worms, M. V. Slingerland, 3 pls.

9. PROCEEDINGS OF THE ZOOLOGICAL SOCIETY OF LONDON, 1896, part iii, Oct. 1, 1896.—Explanation of the plan adopted for preparing an 'Index Generum et Specierum Animalium,' C. D. Sherborn. On Walker's American types of Lepidoptera in the Oxford University Museum, W. Schaus. On the Theraphosidæ of the Lower Amazons: being an account of the new genera and species of this group of spiders discovered during the expedition of the steamship 'Faraday' up the River Amazons, F. O. P. Cambridge, 3 pls.

10. BULLETIN DE LA SOCIETE VAUDOISE DES SCIENCES NATURELLES (4), xxxi, No. 119. Lausanne, December, 1895. Received Jan. 25, 1897. Some biological observations on the wasps, A. Forel.

11. THE JOURNAL OF BOTANY. London, January, 1897.—Intoxication of humble-bees on certain capitulate flowers, J. L. Williams.

12. ANNALEN DES K. K. NATURHISTORISCHEN HOFMUSEUMS, xi, 2. Vienna, 1896. Received Jan. 25, 1897.—Third contribution to the Lepidopterous fauna of the Canaries, Dr. H. Rebel, 1 pl.

13. BULLETIN DE LA SOCIETE NATIONALE D'ACCLIMATATION DE FRANCE. Paris, August, 1896.—Applied entomology in Europe (cont.)—France, P. Marchal.

14. REVUE SCIENTIFIQUE. Paris, Jan. 2, 1897.—Biology of *Melolontha*, X. Raspail.——Jan. 22, Flies and mosquitoes as agents of contagion, J. H.

15. TRANSACTIONS OF NOVA SCOTIAN INSTITUTE OF SCIENCE, ix, pp. 208–218.—Preliminary notes on the Orthoptera of Nova Scotia, H. Piers. Separates issued November, 1896. Received Jan. 25, 1897.

16. ANNUAL REPORT OF THE BOARD OF REGENTS OF THE SMITHSONIAN INSTITUTION to July, 1894. Washington, 1896. Received Feb. 1, 1897.—Ants' nests, Dr. A. Forel (transl. from Neujahrsblatt Naturf. Gesell. Zurich, 1893).

17. NOVITATES ZOOLOGICÆ, iii, 4. Tring, England, Dec. 29, 1896.—New species of Drepanulidæ, Thyrididæ, Uraniidæ, Epiplemidæ and Geometridæ in the Tring Museum. W. Warren. On mechanical selection and other problems, K. Jordan, 4 pls.

18. THE OTTAWA NATURALIST, x, 9, December, 1896.—Fauna Ottawaensis: Hymenoptera Parasitica—Proctotrypidæ, W. H. Harrington.

19. THE AMERICAN NATURALIST. Philadelphia, February, 1897.—Nocturnal protective coloration of mammals, birds, fishes, insects, etc., A. E. Verrill. A viviparous Ephemerid, M. Causard (from Ann. Mag. Nat. Hist.).

20. FOLKESTONE NATURAL HISTORY AND MICROSCOPICAL SOCIETY. Proceedings for 1896.—Protective resemblance and other means of defence in insects, with special reference to butterflies and moths, S. G. Hills. Variation in the Lepidoptera and its causes, Dr. H. G. Knaggs.

21. TIJDSCHRIFT VOOR ENTOMOLOGIE, xxxix, 3-4. The Hague, Dec. 28, 1896.—List of Dutch Acari—ii, iii, Dr. A. C. Oudemans. Notes on Acari, id. Some remarks on the further division of the genus *Agrotis* Led., P. C. T. Snellen, 1 pl. On the geographical distribution of the genus *Siphona* Meig., F. M. Van der Wulp.

22 COMPTES RENDUS. L'ACADEMIE DES SCIENCES. Paris, Jan. 4, 1897.—The Malpighian tubules of Orthoptera, L. Bordas.——January 11.—On the relations of *Discopoma comata* Berlese with *Lasius mixtus* Nylander, C. Janet, figs.

23. APPLETONS' POPULAR SCIENCE MONTHLY. New York, February, 1897.—How plants and animals spend the Winter, W. S. Blatchley.

24. PROCEEDINGS OF THE AMERICAN ACADEMY OF ARTS AND SCIENCES xxxii, 9, January 1897.—The genera of North American Melanopli, S. H. Scudder.

25. THE INTERNATIONAL JOURNAL OF MICROSCOPY AND NATURAL SCIENCE (3), vii, pt. 33. London, January, 1897.—What is a spider?, Dr. J. S. Walker, 1 pl. On the nature of supernumerary appendages in insects, W. Bateson. British Hydrachnidæ, pt. vii, C. D. Soar, 1 pl.

26. MITTHEILUNGEN DER SECTION FUR NATURKUNDE DES OESTERREICHISCHEN TOURISTEN-CLUB, viii. Vienna, 1896.—On life in captivity and suicide of scorpions, A. Steur.

27. THE JOURNAL OF COMPARATIVE MEDICINE. Philadelphia, February, 1897.—The cattle-tick plague: preventive treatment, C. Curtice.

28. PROCEEDINGS OF THE U. S. NATIONAL MUSEUM, xix, No. 1113. Washington, 1896. Received Feb. 8, 1897.—Descriptions of new species of North American Coleoptera in the families Cerambycidæ and Scarabæidæ, M. L. Linell.

29. THE AMERICAN MONTHLY MICROSCOPICAL JOURNAL. Washington, January, 1897.—The value of peroxide of hydrogen in the preparation of entire insects, C. E. Hanaman.

30. ELEVENTH REPORT on the injurious and other insects of the State of New York for the year 1895. By J. A. Lintner, Ph.D., State Entomologist. Albany, University of the State of New York, 1896. From the Forty-ninth Report on the New York State Museum, pp. 87–325, 25 text figures, 16 pls.

31. BULLETIN No. 5. New Series. U. S. Dep't of Agriculture, Division of Entomology.—Insects affecting domestic animals: an account of the species of importance in North America, with mention of related forms occurring on other animals. Prepared under the direction of the Entomologist, by Herbert Osborn, Professor of Zoology and Entomology, etc. Washington, 1896. A few months ago we had the pleasure of noticing briefly another bulletin of this series, on Household Insects, referring to it as one of, if not the, most useful ever issued by the Department. We have in the present publication one to which we can apply terms of equal praise. In its 302 pages, 170 text figures and five plates are described and illustrated numerous parasitic insects in a systematic zoological order, under the headings of Diptera, Siphonaptera, Hemiptera, Mallophaga and Arachnida. Although remedies are mentioned in connection with each parasite throughout the work, a separate chapter is devoted to preventives and remedial measures in general. Following is a list of parasites according to hosts, a bibliography and an index. Thanks for such a valuable treatise are due to Prof. Osborn, to the late Prof. Riley and to Dr. Howard.

32. BULLETIN OF THE AMERICAN MUSEUM OF NATURAL HISTORY, viii, art. xix. New York, Dec. 16, 1896.—Transformations of some North American hawk-moths, W. Beutenmüller.

33. ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE BELGIQUE, xl, 12. Brussels, Jan. 8, 1897.—Note on the male of *Prestwichia aquatica* Lubbock, Hymenopter of the family Myrmaridæ, V. Willem, figs. Exotic Hemiptera-Heteroptera, A. L. Montandon.

34. THE CANADIAN ENTOMOLOGIST. London, Ont., February, 1897. —Rev. Thomas W. Fyles, portrait and sketch. A parasite of hemipterous eggs, T. D. A. Cockerell. Notes on *Vanessa interrogationis*, W. F. Fiske. Larval stages of *Amphion nessus* Cr., W. Beutenmüller. The Coleoptera of Canada, xx. Chrysomelidæ of Ontario and Quebec (cont), H. F. Wickham, figs. On *Ledra perdita* A. and S., C. F. Baker. Some new species and varieties of Lepidoptera from the western U. S., W. Barnes. Catalogue of the phytophagous and parasitic Hymenoptera of Vancouver Island (cont.), W. H. Harrington. A new species of *Protandrena* Ckll., S. N. Dunning.

35. POPULAR SCIENCE. New York, February, 1897.—The praying *mantis*, A. Ellsworth, fig.

36. PSYCHE. Cambridge, Mass., 1897.—Imaginal discs in insects, H. S. Pratt, figs. *Diaphomera femorata*, S. H. Scudder.

37. THE ENTOMOLOGIST'S MONTHLY MAGAZINE. London, February, 1897.—On the terminology of the scale-like organs which lie between the roots of the wings and the scutellum of Diptera, R. H. Meade. On the biology of *Cæmarota flavitarsis* Meig., Dr. P. Marchal. Hints on collecting Aculeate Hymenoptera, E. Saunders. An attempt to elucidate and fix the types of *Tortrix*, *Tinea* and *Alucita*, three of the Linnean subdivisions of *Phalæna* L., Lord Walsingham and J. H. Durrant.

38. ENTOMOLOGISCHE NACHRICHTEN, xxiii, 2. Berlin, January, 1897. —Three new Cicindelas and on *Neolaphyra* Bedel, Dr. W. Horn. On some ant-guests, Dr. K. Escherich. Summary of E. Wasmann's 'Die Myrmekophilen und Termitophilen' at the International Congress of Zoology at Leyden, September, 1895.

39. BULLETIN FROM THE LABORATORIES OF NATURAL HISTORY OF THE STATE UNIVERSITY OF IOWA, iv, 2, January, 1897.—The Coleoptera of the Lower Rio Grande Valley, H. F. Wickham.

40. THE ENTOMOLOGIST. London, February, 1897.—On naming geographical varieties, H. J. Elwes. A catalogue of the Lepidoptera of Ireland (cont.), W. F. de Vismes Kane. Silk-producing Lepidoptera, A. Wailly.

41. BERLINER ENTOMOLOGISCHE ZEITSCHRIFT, xli. 2 and 3. Berlin, December, 1896.—Dipterological studies—iv. Ephydridæ, T. Becker 4 pls. Notice on the terms tegula, anti-tegula, squama and alula, as used in Dipterology, C. R. Osten Sacken.

42. THE ENTOMOLOGIST'S RECORD. London, Jan. 15, 1897.—Neuration of the Rhopalocera, A. Quail, 1 pl.

43. FLOWERS AND INSECTS, xvii. By Charles Robertson. Reprint from Botan Gazette, xxii, 2, August, 1896.

44. SOCIETAS ENTOMOLOGICA, xi, 21. Zurich-Hottingen, Feb. 1, 1897. —Two noteworthy cases of parasitism in *Endromis versicolora*, C. Frings (Chalcids in *Phora* in *versicolora*).

45. U. S. DEP'T OF AGRICULTURE. Farmers' Bulletin No. 45.—Some insects injurious to stored grain. By F. H. Chittenden. Washington, December, 1896; 24 pp., 18 figs.

46. ANHANG ZU DEN ABHANDLUNGEN DER KONIGL. PREUSSISCHEN AKADEMIE DER WISSENSCHAFTEN ZU BERLIN VOM JAHRE 1896.—Outlines of the development and structure of the body of Odonata and Ephemerida, Dr. R. Heymons, 2 pls.

INDEX TO THE PRECEDING LITERATURE.

The number after each author's name in this index refers to the journal, as numbered in the preceding list, in which that author's paper is published; * denotes that the paper in question contains descriptions of new North American forms.

THE GENERAL SUBJECT.

Latter 5, Sherborn 9, Jordan 17, Verrill 19, Causard 19, Hills 20, Blatchley 23, Bateson 25, Marchal 2, Hanaman 29, Osborn 31, Pratt 36, Escherich 38, (Wasmann 38), Elwes 40, Robertson 44, Frings 44.

ECONOMIC ENTOMOLOGY.

Matsumura 6, Slingerland 8, Marchal 13, 37, J. H. 14, Curtice 27, Lintner, 30, Osborn 31, Chittenden 45.

ARACHNIDA.

Michael 1, Cambridge 1*, 9, Perraud 2, Soar 7, 25, Oudemans 21 (two), Janet 22, Walker 25, Steur 26, Curtice 27, Osborn 31.

THYSANURA.

Lintner 30*.

ORTHOPTERA.

Scudder 4, 36, Piers 15, Bordas 22, Scudder 24, Ellsworth 35.

NEUROPTERA.

Causard 19, Osborn 31, Wasmann 38, Heymons 46.

HEMIPTERA.

Cockerell 7, 34, Osborn 31, Montandon 33*, Baker 34.

COLEOPTERA.

Raspail 14, Linell 28*, Wickham 34, 39, W. Horn 38*.

DIPTERA.

Townsend 1*, Van der Wulp 21, Marchal 2, 37, Osborn 31, Pratt 36, Meade 37, Becker 41, Osten Sacken 41, Frings 44.

LEPIDOPTERA.

Garbasso 3, Matsumura 6, Slingerland 8, Schaus 9, Rebel 12, Warren 17*, Jordan 17, Hills 20, Knaggs 20, Snellen 21, Beutenmüller 32, 34, Fiske 34, Barnes 34*, Walsingham and Durrant 37, Elwes 40, Kane 40, Wailly 40, Quail 42, Frings 44.

HYMENOPTERA.

Cockerell 1*, 34*, Latter 5, Forel 10. 16, Williams 11, Harrington 18, 34, Janet 22, Marchal 2, Willem 33, Dûnning 34*, Saunders 37, Escherich 38, Wasmann 38, Frings 44.

Doings of Societies.

PHILADELPHIA, March 9, 1897.

A stated meeting of the Feldman Collecting Social was held at the residence of Dr. Henry Skinner, 716 N. 20th St. Members present: Messrs. Seiss, Laurent, E. Wenzel, F. Hoyer, Johnson, A. Hoyer, H. W. Wenzel, Boerner, Fox, Griffith, Schmitz and Castle. Proposed member: Mr. S. T. Kemp. Honorary members: Dr. Henry Skinner and John B. Smith. Visitors: Messrs. Edw. A. Klages and Chas. Liebeck. Meeting called to order at 8.55 P.M., President Griffith presiding. Before proceeding with the regular business the new president made a brief introductory speech, which was to the point, and met with the approval of all present.

A communication was received from the retiring president, James H. B. Bland, acknowledging the notice of his election to honorary membership.

A communication was read from Fred. Marloff, dated Oak Station, Pa., Feb. 5, 1897, in which he states, referring to the note relative to *Murgantia histrionica* as published in minutes appearing in February NEWS, he thought it might possibly be of interest to know that the same insect proved very injurious in the season just past in the above mentioned locality, being especially abundant on cauliflower. He states that he had never taken it there before. Prof. Smith stated that the same insect had been reported from several localities in New Jersey, having proven quite injurious in some places.

Mr. Liebeck exhibited two boxes of *Bembidium*, representing 108 species, 770 specimens.

Mr. Seiss thought it might be of interest to know how many different species of Hemiptera could be captured on the sunflower, exhibiting the appended variety of specimens taken in a yard in the heart of the city during the Summer and Autumn of 1896: *Corythuca marmorata*, *Triphleps insidiosus*, *Colocaris rapidus*, *Lygus pratensis*, *Hyaliodes vitripennis*, *Garganus fusiformis*, *Ilnacora stalli*, *Episcopus ornatus Typhlocyba rosæ*, *Diedrocephala coccinea*, *Deltocephalus nigrifrons* and a species of *Aphis*. While some of these did more or less damage to the plants, the most destructive insects were *Spilosoma virginica* larvæ and *Diabrotica 12-punctata*.

Dr. Griffith mentioned the capture, on June, 1896, at Manayunk, of specimens of *Cryptorhynchus lapathi* Linn.; also on May, 1896, at Potomac Creek, *Phyrdenus undatus* Lec. and *Obrium rubidum* Lec. In conclusion he spoke at some length on the importance of classification stating that there was great need of a catalogue of Coleoptera in which all synonyms should be given, advocating uniformity above all things.

Prof. Smith discussed the various points mentioned by Dr. Griffith, agreeing that such a book would be a good thing.

Dr. Skinner showed the members a box containing about forty specimens of *Argynnis*, exhibiting all the intergrades between *A. aphrodite* and *A. alcestis*. He also exhibited a suppository mould which answers admirably for moulding naptha cones for use in collection boxes; it is made of bronze metal in the form of a hinge, consisting of three parts, and will produce one dozen cones at one operation.

A motion was made instructing the secretary to write to Dr. Horn informing him of the regret expressed by the members, owing to his illness, and wishing him a speedy and complete recovery.

Mr. Stanley T. Kemp, of Camden, N. J., was unanimously elected an active member of the Social.

No further business being presented the meeting adjourned to the annex at 10.10 P.M.

THEO. H. SCHMITZ, *Secretary*.

CHICAGO ENTOMOLOGICAL SOCIETY.—Pursuant to a call issued by Mr. A. J. Snyder on behalf of several entomologists, fourteen persons interested in the study of entomology met on Friday evening, Jan. 22, 1897, in Parlor N, Sherman House, Chicago, to discuss the advisability of organizing a society independent of the Academy of Sciences, which had not displayed much activity along the line of entomological work. It was the sense of the meeting that the best results could be obtained by independent action. A committe was appointed to formulate a constitution and adjournment was had to Saturday, February 6, at same place.

At the adjourned meeting the report of committee on constitution was accepted, constitution and name adopted, and the following officers elected, viz.: President, O. S. Westcott; Vice-president, A. J. Snyder; Secretary, John L. Healy; Treasurer, W. E. Longley; Curator, Dr. J. L. Hancock. Meetings will be held semi-monthly on Saturday evenings.

JOHN L. HEALY, *Secretary*,
1547 Oakdale Avenue.

The Entomological Section

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

PROCEEDINGS OF MEETINGS.

The following paper was read and accepted by the Committee for publication in ENTOMOLOGICAL NEWS:

NOTES ON PHILANTHUS.

By S. N. DUNNING, Hartford, Conn.

Philanthus anna n. sp. ♀.—Length of body 8–10 mm., of anterior wings 5–7 mm. Black, with yellow markings. Head large, broader than high. punctures not very distinct; eyes parallel inwardly, emarginate, olive-green; ocelli in a triangle, equidistant from each other; face and clypeus upwards to ocelli (except small black spot at base of each antenna), spot behind ocelli (emarginate anteriorly and with a small extension posteriorly) and lines back of eyes, yellow; scape mostly yellow, as is one side of four joints of flagellum, remainder black; mandibles yellow outwardly, black tipped; prothorax emarginate in center, yellow; mesothorax smooth, polished, with scattered rather coarse punctures; metathorax less inclined to be polished, a triangular cavity on posterior lateral angles; scutellum and

post-scutellum polished, no punctuation. The following are yellow: four lines on mesothorax extending from prothorax almost to scutellum, except two outer ones which are shorter and commencing in front of tegulæ and inclined inwards; scutellum small dot at each side and slightly in advance of same, post-scutellum, transverse spots behind same and two large spots on posterior lateral angles, tegulæ, tubercles, elongated spot back of this (and sometimes a rounded spot back of elongated spot) and a still larger triangular spot below these. Abdomen thickly, rather coarsely punctured, a considerable growth of whitish hair below becoming quite thick at tip, a large yellow band on first segment with touch of black above and below not as thickly punctured as following, band on second segment slightly emarginate on posterior side, a touch of black below, band on third segment covering entire surface, bands on fourth, fifth and sixth segments with touch of black anteriorly, seventh segment black and emarginate at tip; venter considerably marked with yellow; coxæ yellow spotted, trochanters yellow tipped, last half too two-thirds femora yellow, as are tibia and first joint of tarsi, last joints of tarsi yellow inclined to rufous; marginal cell about as long as first and second submarginal, second submarginal receiving recurrent at its middle, third submarginal receiving recurrent at end of first fourth. Wings inclined to dusky in outer half; stigma and costa rust colored; submedian cell posterior wings slightly larger than median on the externo-median nervure.

Two specimens (No. 1591 Baker), Colorado, and one, Las Cruces New Mexico, "on *Salix*."—Cockerell.

Related to *P. pacificus* Cr. and *crabroniformis* Sm., but differs as follows:

From *pacificus* in "two spots behind ocelli" forming distinct band in having spots behind and below tubercles, in marking of abdominal bands; abdomen thickly pitted and rather coarsely so and venter yellow.

From *crabroniformis* in having band on vertex, lines on mesothorax (four) and in last segment being black and in punctuation of abdomen.

P. politus Say ♀, July–August; not uncommon here.

P. dubius Cr. ♂, July–August on *Daucus carota;* more common than *politus.*

P. punctatus Say ♂ and ♀, July–August; common.

P. punctatus Say var. *cockerelli* n. var. ♂. Differs from *punctatus* in coloring being all white and wings entirely transparent (Ckll. Nos. 1954 and 4726 "on *Solidago*")

P. sanborni Cr. ♂, July 11 at Southampton, Mass.

P. ventilabris Fab., Algonquin, Ill.; one ♂ (Dr. William A.

Nason); Tifton, Ga., two males one female (Mr. G. R. Pilate), June 12, 1896.

P. bilunatus Cr. This species varies considerably in size and coloration. Two males from Southampton, Mass., are 7 and 10 mm. long and show no yellow on first segment. Two males from Brookings Co., S. D. (Mr. P. C. Truman) are 10–11 mm. long and have interrupted band on first segment. Mr. Fox identified these.

P. trumani n. sp. ♀.—Length of body 18 mm., anterior wings 10 5 mm. Black, with bright yellow and white markings, a thick and long growth of fulvous pubescence on head, thorax, first segment, abdomen above, all of venter and legs as far as and including femora; clypeus, sides of face, larger protruding ovate mark above base of antennæ, seven basal joints of antennæ, prothorax above (this is lighter than face marking), tegulæ crescent-shaped mark below post-scutellum, two wavy spots on first segment abdomen, larger ones not so wavy on second segment, apical half femora and tibia and tarsi of anterior and middle legs and tip of femora and tibia and tarsi of posterior, yellow; narrow fasciæ on third, fourth, fifth and small spots on sixth, all pale white. Head but very little wider than thorax, finely and rather closely punctate; mandibles black, clypeus rounded, face with a black **W** (similar to ♂ *sanbornii* Cress., but not as distinct); eyes large, converging, sub-emarginate at base of antennæ, concave on inner margins, dark brown; ocelli in a triangle. first farther from last two than last two are from each other; mesothorax closely punctate and more finely so than head; metathorax finely but not as closely punctate as mesothorax; a deep groove above and a deep cavity on posterior side; cavity smooth, shining above, more roughly punctate than rest of body below. Abdomen finely and closely punctate, restricted between first and second, and second and third segments, seventh segment black and strongly emarginate; coxæ black, trochanters yellow tipped, first half or so of anterior and middle, and all but tip of posterior, black; stigma and nervures fuscous. Wings cloudy in latter half, first submarginal cell equals second and third combined in length, second submarginal cell receiving recurrent nervure at its center, third submarginal receiving recurrent nervure just a little beyond its base; submedian cell, posterior wings as much longer than median on externo-medial nervure as the recurrent of third submarginal is from its base; transverso-medial nervure with an inward curve at junction with discoidal nervure.

One specimen Summer, 1896, Brookings Co., South Dakota, from Mr. P. C. Truman, after whom I have taken the liberty of naming it. Related to *scutellaris* Cress., but differs principally in size, pubescence and markings.

P. solivagus Say.—As Say's description is not as complete as

it might be I have allowed myself the liberty of giving a detailed account of the species as it is found here:

♂.—Length of body 13 mm., of anterior wings 8 mm. Black, with yellow markings; clypeus, small dot above, sides of face to emargination, large mark above base of antennæ, prothorax, tegulæ, small dot below, large band slightly interrupted before and after near center first segment, uninterrupted narrow bands on segments 2–5, knees, tibiæ and tarsi, all yellow. Head subquadrate, a little broader than high, closely and finely punctate, cheeks and face covered with a fulvous pubescence, which also appears on vertex; eyes emarginate, parallel up to emargination, then inclined inwardly, olive-green; ocelli in a triangle, the foremost larger and set in a cavity (a groove extending from cavity runs down face almost to base of antennæ) nearer to last two than last two are to each other; clypeus slightly carinate at edge, truncate, sides beyond truncation curved inwardly; mandibles black, mustache slender, fulvous: thorax with a fulvous pubescence above, posteriorly at sides and below; mesothorax closely and finely punctate, metathorax a little more coarsely but closely punctate, a central groove above and cavity on posterior side punctate throughout; first segment abdomen more coarsely punctate than rest of body, slightly pubescent, but slightly constricted at tip and as wide as second is at base, remaining segments very finely and closely punctate, smooth and shining band on posterior edge of each segment, last two segments immaculate, tip obtuse, slightly emarginate, venter immaculate with a few hairs, smooth. Legs black (except knees and outwards) with a few scattered hairs; stigma and nervures fulvous; wings pale fulvous, first submarginal cell longer than second and third combined, second submarginal receiving recurrent at end of first two-fifths, third submarginal receiving recurrent near base; submedian cell posterior wings longer than median on externo-medial nervure by more than twice the difference between base of third submarginal of anterior wings and point of receiving the recurrent.

♀.—Similar, length of body 16 mm. of anterior wings 9 mm., yellow on face a little more extended, mandibles at base yellow, no yellow dot below tegulæ and black, shiny, impunctate bands on abdomen do not appear until second or third segment.

♂ and ♀ specimens: ♂ taken Aug. 27, 1893, at Hartford, Conn.; ♀ taken Sept. 15, 1895, Hartford, Conn.

———o———

THE FOURTH SPECIES OF PLENOCULUS.

By WILLIAM J. FOX.

Plenoculus parvus n. sp. ♀.—Anterior margin of clypeus subtruncate in middle, not incised or dentate; the flagellum strongly clavate; first joint longer than second, dorsulum and scutellum finely and closely punctured; middle segments microscopically striated, not impressed above, posterior face more distinctly transversely striated, with a deep

longitudinal central furrow; legs tolerably spinose, tarsal comb feebly developed; pygidial area with large, sparse punctures, not margined or carinated laterally. Black; mandibles except apex, legs except coxæ and extreme tip of abdomen, red; scape beneath and tegulæ yellowish; flagellum beneath testaceous; entire insect clothed more or less with silvery pubescence, especially the head in front and thorax on sides and beneath; apical margins of abdominal segments narrowly testaceous; wings hyaline, strongly iridescent, nervures testaceous. Length 3 mm.

Las Cruces, New Mexico (Cockerell, 5173). This is the smallest of the species of *Plenoculus*, and is not closely related to any of the others. It comes nearest to *P. cockerellii*, in consequence of the non-emarginate or dentate clypeus.

The species of *Plenoculus* seem to fall into two well-marked groups, viz., those having the clypeus strongly emarginate and dentate (*davisii, propinquus*), and those in which the clypeus is neither emarginate, nor dentate (*cockerellii, parvus*).

Plenoculus propinquus varies in the coloration of abdomen. The original types have the abdomen entirely black, whereas recently received specimens from New Mexico and Colorado (collected by Messrs. Cockerell and Gillette respectively) have it suffused with reddish on basal two or three segments.

OBITUARY.

Dr. F. F. MORAWITZ, in St. Petersburg.

A. DAWSETT, Ornithologist and Entomologist, at Reading, England, on Nov. 6, 1896.

Dr. F. WESTHOFF, Dipterist and Privatdocent of the Academy of Münster, on Nov. 12, 1896, aged 36 years.

We have just learned with much sorrow and regret of the death of the well-known Coleopterist, Dr. JOHN HAMILTON, of Allegheny, Pa., who died in Florida. Next month will give a portrait of Dr. HAMILTON and some account of his valuable services to Entomology.

ERRATA.

Under the description of *Pupa*, line 5, vol. viii, p. 2, first word. The word *elytron* should have been used instead of *segment*.

ENTOMOLOGICAL NEWS for February, was mailed Jan. 30, 1897.